scientists are employed varies in its cadre structure from Ministry to Ministry;

(b) if so, the reasons therefor;

(c) whether efforts are being made to make uniform cadre structure for all the Ministries where scientists are employed;

(d) if so, the details thereof; and

(e) if not, the reasons therefor?

THE MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS (SHRIMATI MARGARET ALVA): (a) Yes, Sir.

(b) The difference have arisen as each Departments adopted the scales of pay as existing at the time of introduction of the Scheme.

(c) and (d) The Government reviews from time to time such variations in the cadre structure with a view to rationalise it, depending on the organisational needs.

(e) Does not arise.

Software packages for analysis of sanskrit text

3163. PROF. PREM DHUMAL:
DR. LAXMINARAYAN PANDEY:
SHRI HARIN PATHAK:

Will the PRIME MINISTER be pleased to state:

(a) whether the Government are aware of the work being done abroad on computer application in the analysis of Sanskrit literature; if so, the details thereof;

(b) whether there is any Sanskrit institution which is having central repository of software packages for analysis of Sanskrit text in Devnagri script with diacritical marks of vedic Sanskrit; if so, the details thereof; and

(c) if not, the steps proposed in this regard and the names of the Sanskrit institutions proposed to be identified for this purpose and the mechanism of dissemination of such packages?

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS (SHRIMATI MARGARET ALVA): (a) Yes. Sir. A list of some major works being done abroad on computer applications in analysis of Sanskrit is given in the attached statement.

(b) There is no such Sanskrit Institution in the country having Central repository of software packages for analysis of Sanskrit text in Devnagri script with diacritical marks of Vedic Sanskrit.

(c) The Centre for Development of Advanced Computing (C-DAC), Pune an autonomous Society under the Department of Electronics has initiated work in this direction for providing tools for analysis of Sanskrit and Vedic text in Indian Scripts. Packages are under development and the mechanism for their dissemination will be worked out thereafter.

STATEMENT

List of Some Major Works Being Done Abroad On Computer Applications In Analysis Of Sanskrit

1. "Shastraic Sanskrit as Machine Translation Interlingua" by Rick Briggs, NASA, USA. Doctoral thesis.

2. "Sanskrit—Computational" by Dr. E. Schredl, Germany, 1990.

3. "On Knowledge Representation using Semantic Networks and Sanskrit" by S. N. Srihari, WJ. Rapaport and D. Kumar. Technical Report 87-03 of SUNY at Buffalo, USA, (Describes SNePS, a Semantic Network tool for NIP).

4. "Knowledge Representation in Sanskrit and CAI" by Rick Briggs, NASA, USA, AL Magazine, Spring, 1985.

5. "The morphological analysis of Sanskrit by Computer" by A. Verboom, Institut Kern, Germany, Ph. D. Thesis.

6. "The Paninian approach to Natural Language Processing" by Prof. Subhash C. Kak, Lousiana State University USA.

7. "A Knowledge Representation Language based on Navya-Nyaya" by Anand V. Hudli, Indiana University, USA.

Computer-Based Corpus and Dictionaries for Sanskrit

3164. PROF. PREM DHUMAL : Will the PRIME MINISTER be pleased to state :

(a) whether there are any computer-based corpus and dictionaries for Sanskrit; if so, the details thereof ;

(b) whether there is any computer-based bilingual dictionary of Sanskrit and a foreign language ;

(c) whether the Government propose to develop computer-based Sanskrit dictionary with syntactic and semantic features ;

(d) the manner in which Sanskrit lexicographers are likely to be involved ; and

(e) the estimated budget, duration and scientific manpower deployment in such a work ?

THE MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES AND PENSIONS (SHRIMATI MARGARET ALVA) : (a) and (b) No, Sir.

(c) The Centre for Development of Advanced Computing (C-DAC), Pune, an autonomous registered Society under the administrative control of Department of Electronics is engaged in developing a Sanskrit Paninian platform (a corpus Grammar) with Astadhyayi (Sutrapatha), Ganapatha (Nominal formation), Dhatupatha (Verbal formation), Linganusasana (gender) and Siksa (Phonetics), with diacritical marks (Roman transliteration) and accents (for Vedic Sanskrit) besides the facilities for North and South Indian and Perso-Arabic transliterations.

(d) and (e) Such development work will involve close interaction between the Sanskrit Lexicographers and computer scientists. A project has been initiated under Department of Electronics Technology Development for Indian Languages (TDIL) Programme for the development of Lexicon at Sampurnanand Sanskrit University, Varanasi. A budget of Rs. 33.5 lakhs has been estimated for this project with a duration of three years.

[Translation]

Setting up of Industries in Ajamgarh, U.P.

3165. SHRI RAM BADAN : Will the